



Cinergy Corp.  
139 East Fourth Street  
Rm 25 AT II  
P.O. Box 960  
Cincinnati, OH 45201-0960  
tel 513.287.3601  
fax 513.287.3810  
jfinnigan@cinergy.com

**John J. Finnigan, Jr.**  
Senior Counsel

**VIA OVERNIGHT MAIL**

March 30, 2005

Ms. Elizabeth O'Donnell  
Executive Director  
Kentucky Public Service Commission  
211 Sower Boulevard  
Frankfort, KY 40602

RECEIVED

MAR 31 2005

PUBLIC SERVICE  
COMMISSION

Re: Case No. 2005-00090

Dear Ms. O'Donnell:

Enclosed please find an original and ten (10) copies of The Union Light, Heat and Power Company's Responses to the Data Request of the Commission Staff in the above-referenced case and two (2) copies of the cover sheet to be stamped and returned in the attached envelope. Also enclosed is the original and ten (10) copies of a Petition for Confidential Treatment of Information, along with the confidential information filed under seal.

Should you have any further questions, please do not hesitate to call me.

Very truly yours,

John J. Finnigan, Jr.  
Senior Counsel

JJF/sew

Enclosures

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

RECEIVED  
MAR 31 2005  
PUBLIC SERVICE  
COMMISSION

In the Matter of An Assessment of ) ADMINISTRATIVE  
Kentucky's Electric Generation, ) CASE NO. 2005-00090  
Transmission and Distribution Needs )

---

**THE UNION LIGHT, HEAT AND POWER COMPANY'S AND  
THE CINCINNATI GAS & ELECTRIC COMPANY'S  
JOINT PETITION FOR THE CONFIDENTIAL TREATMENT OF CERTAIN  
INFORMATION FILED IN RESPONSE TO COMMISSION'S ORDER**

---

The Union Light, Heat and Power Company (ULH&P) and The Cincinnati Gas & Electric Company (CG&E) (collectively, Petitioners) respectfully submit this petition in accordance with 807 KAR 5:001 Section 7, seeking the confidential treatment of certain information provided in response to the Commission's March 10, 2005 Order in this proceeding. In support of this petition, Petitioners submit the following:

1. On March 10, 2005, the Commission issued an Order in this proceeding seeking responses to questions pertaining to generation, transmission and distribution needs of Kentucky. The Commission made ULH&P, among others, a party to this proceeding. ULH&P filed responses to these

questions on March 31, 2005. At that time, ULH&P sought, and the Commission granted, confidential treatment of certain generation outage information.

2. The Commission's regulations, in 807 KAR 5:001, provide that any person requesting confidential treatment of any material file a petition setting forth the grounds, pursuant to KRS 61.870 *et seq.*, upon which the Commission should classify that material as confidential.
3. Kentucky Revised Statute § 61.878(1)(c)(1) provides that records confidentially disclosed to an agency or required to be disclosed to the agency be exempt from Kentucky's open records statutes, KRS 61.870 *et seq.* where the records are generally recognized as confidential or proprietary, and which if openly disclosed would permit an unfair commercial advantage to competitors of the entity that disclosed the records.
4. ULH&P's affiliate, CG&E, has assisted ULH&P in responding to the Commission's data requests in this proceeding. Because ULH&P does not presently own generation but anticipates acquiring generation facilities from CG&E, CG&E has assisted ULH&P in providing CG&E-related generation information in the spirit of cooperation.
5. Petitioners submit that the following information, if openly disclosed, could present antitrust issues by giving Petitioners' competitors access to competitively sensitive, confidential information, which in turn could

cause energy prices to consumers to be above competitive rates, and would permit competitors of Petitioners to gain an unfair competitive advantage in the marketplace:

- a. The estimated capital cost per kW and energy cost per kWh for new generation and technology, provided in response to data request KyPSC-DR-01-012.
6. In ULH&P's case, it does not own generation at the present time; therefore it has no historical data with which to respond to this question. CG&E supplied information to ULH&P to respond to this data request, based on projected cost data for 2005, because the transfer of the generating plants to ULH&P will occur in 2005. This information is confidential because it is based on projected 2005 costs, which is not publicly available information. CG&E vigorously strives to maintain the confidentiality of this information. Further, this information is held to be confidential and proprietary throughout the electric industry for the reasons discussed herein.
  7. The above information, if openly disclosed, would enable competitors in the wholesale power market to ascertain the manner in which Petitioners manage and operate their portfolio of generation assets.

A list of projected 2005 energy costs will provide power marketing competitors with knowledge that will allow them potentially to manipulate the marketplace so as to unnecessarily cause consumers to pay

more for electricity than they otherwise would. A list of projected 2005 energy costs will grant competitors a distinct advantage in that they would be able to anticipate Petitioners' generation costs. With this information, a competitor could take actions that in the absence of this information it would not take. Such actions might include adjusting its prices, either to win contracts on which CG&E may also be bidding — business the competitors otherwise would not be in a position to win, or to set its prices artificially high to take advantage of such knowledge, the latter action obviously forcing consumers to pay higher prices for power.

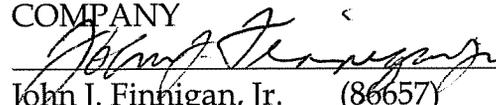
8. Pursuant to 807 KAR 5:001 Section 7, Petitioners have attached to this Petition, under seal, one complete copy of ULH&P's Responses to the Commission's Data Request, and ten copies of ULH&P's Responses to the Commission's Data Request with the confidential material omitted or otherwise redacted.

WHEREFORE, Petitioners respectfully request that the Commission:

1. Accept this Petition for filing;
2. Grant the information delineated herein confidential treatment in accordance with 807 KAR 5:001 Section 7 and KRS 61.870 *et seq.*

Respectfully submitted,

THE UNION LIGHT, HEAT AND POWER  
COMPANY

  
\_\_\_\_\_  
John J. Finnigan, Jr. (86657)

Senior Counsel

2500 Atrium II

P.O. Box 960

Cincinnati, Ohio 45201-0960

Phone: (513) 287- 3601

Fax: (513) 287-3810

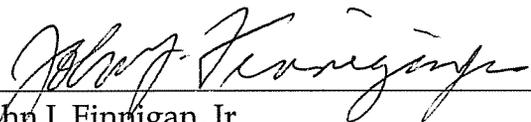
e-mail: [jfinnigan@cinergy.com](mailto:jfinnigan@cinergy.com)

NOTICE OF FILING/ CERTIFICATE OF SERVICE

I hereby give notice that on this 30<sup>th</sup> day of March, 2005, I have filed with the Kentucky Public Service Commission at 211 Sower Boulevard, Frankfort, Kentucky, 40601:

- (a) An original and 10 true copies of a Joint Petition For The Confidential Treatment Of Certain Information Filed In Response To Commission's Order;
- (b) An un-redacted original (filed under seal) and 10 redacted copies of The Union Light, Heat and Power Company's Responses to the Commission's Information Requests;

I further certify that on this 30<sup>th</sup> day of March, 2005, I have served a copy of the forgoing Joint Petition for Confidential Treatment and the non-confidential information by regular U.S. mail, postage prepaid, on the parties to this proceeding at the addresses indicated below.

  
\_\_\_\_\_  
John J. Finnigan, Jr.

James M. Miller, Esq.  
Attorney for Big Rivers  
Electric Corporation  
Sullivan, Mountjoy, Stainback  
& Miller, PSC  
100 St. Ann Building  
PO Box 727  
Owensboro, KY 42302-0727

Michael L. Kurtz, Esq.  
Attorney for Alcan Primary  
Products Corporation;  
Century Aluminum of  
Kentucky, LLC and  
Kentucky Industrial  
Utility Customers, Inc.  
Boehm, Kurtz & Lowry  
36 East Seventh Street, Suite 1510  
Cincinnati, OH 45202

Elizabeth Blackford, Esq.  
Attorney General's Office  
1024 Capital Center Drive  
Frankfort, KY 40601-8204

Timothy C. Mosher  
American Electric Power  
101A Enterprise Drive  
P.O. Box 5190  
Frankfort, KY 40602

Michael S. Beer  
Kentucky Utilities Company  
c/o Louisville Gas & Electric Co.  
P.O. Box 32010  
Louisville, KY 40232-2010

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

RECEIVED

MAR 31 2005

PUBLIC SERVICE  
COMMISSION

In the Matter of: )  
)  
An Assessment of Kentucky's Electric )  
Generation, Transmission and ) Administrative Case No. 2005-00090  
Distribution Needs )

---

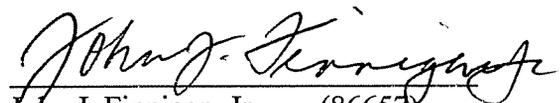
THE UNION LIGHT, HEAT AND POWER COMPANY'S  
RESPONSES TO THE KENTUCKY PUBLIC SERVICE COMMISSION'S  
FIRST SET OF DATA REQUESTS

---

The Union Light, Heat and Power Company submits the following responses to  
the Commission's First Set of Data Requests in this proceeding.

Respectfully submitted,

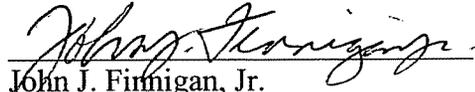
THE UNION LIGHT, HEAT  
AND POWER COMPANY



John J. Finnigan, Jr. (86657)  
Senior Counsel  
Cinergy Services, Inc.  
2500 Atrium II  
P. O. Box 960  
Cincinnati, Ohio 45201-0960  
Phone: (513) 287-3601  
Fax: (513) 287-3810  
e-mail: jfinnigan@cinergy.com

CERTIFICATE OF SERVICE

I hereby give notice that on this 30th day of March, 2005, I have served a copy of the foregoing responses of The Union Light, Heat and Power Company to The Kentucky Public Service Commission's First Set of Data Requests by ordinary U.S. mail, postage prepaid, to the parties listed below.

  
John J. Finnigan, Jr.

James M. Miller, Esq.  
Attorney for Big Rivers Electric Corporation  
Sullivan, Mountjoy, Stainback & Miller, PSC  
100 St. Ann Building  
PO Box 727  
Owensboro, KY 42302-0727

Michael L. Kurtz, Esq.  
Attorney for Alcan Primary Products Corporation;  
Century Aluminum of Kentucky, LLC and  
Kentucky Industrial Utility Customers, Inc.  
Boehm, Kurtz & Lowry  
36 East Seventh Street, Suite 1510  
Cincinnati, OH 45202

Elizabeth Blackford, Esq.  
Attorney General's Office  
1024 Capital Center Drive  
Frankfort, KY 40601-8204

Timothy C. Mosher  
Attorney for American Electric Power  
101A Enterprise Drive  
P.O. Box 5190  
Frankfort, KY 40602

Michael S. Beer  
Attorney for Kentucky Utilities Company  
c/o Louisville Gas & Electric Co.  
P.O. Box 32010  
Louisville, KY 40232-2010



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-001**

**REQUEST:**

1. Provide a summary description of your utility's resource planning process. This should include a discussion of generation, transmission, demand-side, and distribution resource planning.

**RESPONSE:**

Demand-Side Planning:

The Company's objective is to implement all cost-effective demand-side management (DSM) programs, subject to agreement from the DSM collaboratives and approval of the Kentucky Public Service Commission. Potential energy efficiency measures and programs are initially identified through a market potential analysis conducted by external consultants. Additional measures and programs may be identified by members of the Residential DSM Collaborative and members of the Commercial and Industrial DSM Collaborative. All identified measures and programs are evaluated for cost-effectiveness. Results are presented to the respective collaboratives for review and potential inclusion in a joint application to the Kentucky Public Service Commission to obtain approval to implement the selected programs. The load impacts of the recommended set of DSM programs are also included as a component in the Company's Integrated Resource Plan.

Integrated Resource Planning:

The process utilized to develop the IRP consists of two major components. One is organizational/structural, while the other was analytical.

The organizational process involves the formation of an IRP Team with representatives from key functional areas of Cinergy. The Team approach facilitates the high level of communication necessary across the functional areas required to develop an IRP. The Team also is responsible for examining the IRP requirements contained within the Kentucky rules and conducting the necessary analyses to comply with them. In addition, it is important to select the best way to conduct the integration while incorporating interrelationships with other planning areas, *e.g.*, fuel planning and procurement and, to the extent allowable considering the standards of conduct in FERC Order 889, transmission/distribution planning.

The analytical process involves the following specific steps:

1. Develop planning objectives and assumptions.

2. Prepare the electric load forecast.
3. Identify and screen potential electric demand-side resource options.
4. Identify, screen, and perform sensitivity analysis around the cost-effectiveness of potential electric supply-side resource options.
5. Identify, screen, and perform sensitivity analysis around the cost-effectiveness of potential environmental compliance options.
6. Integrate the demand-side, supply-side, and environmental compliance options.
7. Perform final sensitivity analyses on the integrated resource alternatives, and select the plan.
8. Determine the best way to implement the chosen plan.

Transmission and Distribution Planning:

Annually, electric system studies are performed to determine where and when system modifications are needed to ensure load is adequately served. When these needs are identified, multiple solutions are developed, addressing not only the capacity need, but also providing opportunities to improve reliability and operating flexibility. Transmission Planning is done using an integrated model of the entire system. Distribution planning is done at the feeder, transformer and load area level. Load forecasting for the distribution system is based on historical load trends and expected or known load changes on individual feeders, transformers and areas.

**WITNESS RESPONSIBLE:** Richard G. Stevie (DSM)  
Diane L. Jenner (IRP)  
Ronald C. Snead (T&D Planning)



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-002**

**REQUEST:**

2. Are new technologies for improving reliability, efficiency and safety investigated and considered for implementation in your power generation, transmission and distribution system?
  - a. If yes, discuss the new technologies that were considered in the last 5 years and indicate which, if any, were implemented.
  - b. If no, explain in detail why new technologies are not considered.

**RESPONSE:**

Yes, new technologies are considered in Cinergy's planning processes.

On the generation side, Cinergy reviews and screens the technologies included in the EPRI Technical Assessment Guide™ (TAG®). These technologies include Subcritical and Supercritical Pulverized Coal units, fluidized bed units, advanced CTs and CCs, Integrated Coal Gasification Combined Cycle (IGCC) units, fuel cells, wind turbines, solar, biomass, and storage units. While none of these new technologies have been implemented yet, Cinergy continues to monitor and evaluate these technologies for their feasibility and cost-effectiveness. Cinergy is currently involved in a detailed study with GE and Bechtel concerning the potential construction of an IGCC.

On the T&D side, Cinergy keeps abreast of new technical developments and investigates those that appear to be cost effective and ready to be commercialized. For example, Cinergy has reviewed devices that provide dynamic line ratings, composite-core conductors, automated meter reading, and broadband power line applications. Cinergy has implemented limited usage of broadband power line applications.

**WITNESS RESPONSIBLE:** Diane L. Jenner (generation)  
Ronald C. Snead (T&D)



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-003**

**REQUEST:**

3. Is your utility researching any renewable fuels for generating electricity?
  - a. If so, what fuels are being researched?
  - b. What obstacles need to be overcome to implement the new fuels?

**RESPONSE:**

- a. The fuels being researched are wind, solar, and biomass.
- b. The main obstacle with these new fuels is that they are not cost-effective on a utility scale.

**WITNESS RESPONSIBLE:** Diane L. Jenner



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-004**

**REQUEST:**

4. Provide actual and weather-normalized annual native load energy sales for calendar years 2000 through 2004. Provide actual annual off-system energy sales for this same period disaggregated into full requirements sales, firm capacity sales, and non-firm or economy energy sales. Off-system sales should be further disaggregated to show separately those sales in which your utility acts as a reseller, or transporter, in a power transaction between two or more other parties.

**RESPONSE:**

Please see the attachment to KyPSC-INT-01-004.

ULH&P did not own generation during this time period. ULH&P purchased generation from CG&E through a wholesale power contract to supply power to ULH&P's native load customers. ULH&P therefore did not have any off-system energy sales.

**WITNESS RESPONSIBLE:** James A. Riddle

The Union Light, Heat and Power Company  
Electric Energy Sales - Mwh  
2000

	Actual	Weather Normal
January	357,024	330,422
February	310,329	345,195
March	310,077	311,962
April	284,952	275,053
May	318,594	312,742
June	362,197	365,860
July	383,988	368,366
August	391,909	413,353
September	324,425	345,305
October	304,313	310,110
November	302,656	309,014
December	362,067	346,579
Total	4,012,531	4,033,961

2001

	Actual	Weather Normal
January	352,945	381,121
February	305,339	338,644
March	326,162	350,989
April	272,745	316,640
May	297,433	272,187
June	328,615	326,799
July	372,641	395,508
August	392,212	362,352
September	297,957	318,945
October	280,642	280,074
November	273,566	280,820
December	310,771	326,139
Total	3,811,028	3,950,218

2002

	Actual	Weather Normal
January	338,053	352,260
February	301,710	289,161
March	324,193	299,346
April	297,249	278,137
May	284,284	294,321
June	383,053	343,883
July	440,280	394,092
August	429,422	367,880
September	359,685	302,381
October	297,350	302,081
November	305,066	305,263
December	334,774	331,849
Total	4,095,119	3,860,654

	2003	
	Actual	Weather Normal
January	346,380	338,343
February	309,617	290,956
March	296,326	289,919
April	270,226	273,893
May	275,977	276,687
June	301,167	323,379
July	367,453	379,963
August	384,693	404,843
September	296,309	293,722
October	285,532	288,756
November	268,930	270,582
December	327,756	327,812
Total	3,730,366	3,758,855

	2004	
	Actual	Weather Normal
January	340,316	338,969
February	314,802	301,660
March	300,249	304,713
April	269,365	269,385
May	309,125	304,839
June	347,793	336,050
July	356,898	372,115
August	347,281	391,073
September	324,292	335,562
October	281,832	281,934
November	274,350	275,968
December	347,730	351,594
Total	3,814,033	3,863,862



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-005**

**REQUEST:**

5. Provide actual and weather-normalized annual coincident peak demands for calendar years 2000 through 2004 disaggregated into (a) native load demand, firm and non-firm; and (b) off-system demand, firm and non-firm.

**RESPONSE:**

Please see the attachment to KyPSC-INT-01-005. See response to KyPSC-INT-01-004 regarding off-system sales.

**WITNESS RESPONSIBLE:** James A. Riddle

The Union Light, Heat and Power Company  
Electric Energy Demands - Mw

	Actual	Weather Normal
2000	778	828
2001	773	863
2002	766	799
2003	812	837
2004	814	912



**KyPSC Staff First Set Interrogatories  
ULH&P Case No. 2005-00090  
Date Received: March 10, 2005  
Response Due Date: March 31, 2005**

**KyPSC-INT-01-006**

**REQUEST:**

6. Provide a summary of monthly power purchases for calendar years 2000 through 2004 disaggregated into firm capacity purchases required to serve native load, economy energy purchases, and purchases in which your utility acts as a reseller, or transporter, in a power transaction between two or more other parties. Include the average cost per megawatt-hour for each purchase category.

**RESPONSE:**

For 2000-2004, ULH&P was served through a full requirements contract with CG&E, so all purchases were required to serve native load. The monthly purchases and average cost per megawatt-hour are shown in Attachment KyPSC-INT-01-006. The costs include demand charges, energy charges, and transmission charges. There were no economy energy purchases or purchases in which ULH&P acted as a reseller or transporter in a power transaction between two or more other parties.

**WITNESS RESPONSIBLE:** Diane L. Jenner

The Union Light, Heat & Power Co.  
January 2000 - December 2004

2000	Purchased Power Expense	Transmission Expense	Total Expense	Mwh's	Price/Mwh
January	12,082,805.31		12,082,805.31	357,024	\$ 33.84
February	12,773,077.18		12,773,077.18	310,329	\$ 41.16
March	10,355,561.26		10,355,561.26	310,077	\$ 33.40
April	11,886,403.82		11,886,403.82	284,952	\$ 41.71
May	11,909,261.05		11,909,261.05	318,594	\$ 37.38
June	16,133,163.52		16,133,163.52	362,197	\$ 44.54
July	15,913,958.96		15,913,958.96	383,988	\$ 41.44
August	16,356,765.21		16,356,765.21	391,909	\$ 41.74
September	14,971,162.05		14,971,162.05	324,425	\$ 46.15
October	11,618,691.53		11,618,691.53	304,313	\$ 38.18
November	11,681,025.47		11,681,025.47	302,656	\$ 38.60
December	14,233,427.51		14,233,427.51	362,067	\$ 39.31
<b>Total</b>	<b>\$ 159,915,302.87</b>	<b>\$ -</b>	<b>\$ 159,915,302.87</b>	<b>4,012,529</b>	<b>\$ 39.85</b>

2001	Purchased Power Expense	Transmission Expense	Total Expense	Mwh's	Price/Mwh
January	17,265,394.19		17,265,394.19	352,945	\$ 48.92
February	8,599,760.94		8,599,760.94	305,339	\$ 28.16
March	10,978,776.93		10,978,776.93	326,162	\$ 33.66
April	9,737,462.51		9,737,462.51	272,745	\$ 35.70
May	12,118,508.02		12,118,508.02	297,433	\$ 40.74
June	12,666,703.50		12,666,703.50	328,615	\$ 38.55
July	17,217,673.02		17,217,673.02	372,641	\$ 46.20
August	17,092,324.00		17,092,324.00	392,212	\$ 43.58
September	13,920,204.74		13,920,204.74	297,957	\$ 46.72
October	10,120,987.56		10,120,987.56	280,642	\$ 36.06
November	11,079,201.71		11,079,201.71	273,566	\$ 40.50
December	10,764,565.04		10,764,565.04	310,771	\$ 34.64
<b>Total</b>	<b>\$ 151,561,562.16</b>	<b>\$ -</b>	<b>\$ 151,561,562.16</b>	<b>3,811,030</b>	<b>\$ 39.77</b>

2002	Purchased Power Expense	Transmission Expense	Total Expense	Mwh's	Price/Mwh
January	13,002,704.60		13,002,704.60	338,053	\$ 38.46
February	11,662,736.32	908,025.75	12,570,762.07	301,710	\$ 41.67
March	12,172,522.85	2,491,834.34	14,664,357.19	324,193	\$ 45.23
April	11,813,326.00	1,210,857.87	13,024,183.87	297,249	\$ 43.82
May	11,064,150.04	1,093,933.90	12,158,083.94	284,284	\$ 42.77
June	14,931,022.00	1,498,326.88	16,429,348.88	383,053	\$ 42.89
July	16,820,279.20	1,624,885.94	18,445,165.14	440,280	\$ 41.89
August	16,981,217.10	1,607,390.10	18,588,607.20	429,422	\$ 43.29
September	14,642,665.31	1,575,864.46	16,218,529.77	359,685	\$ 45.09
October	11,939,453.20	224,873.27	12,164,326.47	297,350	\$ 40.91
November	12,258,219.04	1,011,600.06	13,269,819.10	305,066	\$ 43.50
December	12,446,175.04	1,389,004.49	13,835,179.53	334,774	\$ 41.33
<b>Total</b>	<b>\$ 159,734,470.70</b>	<b>\$ 14,636,597.06</b>	<b>\$ 174,371,067.76</b>	<b>4,095,119</b>	<b>\$ 42.58</b>

2003	Purchased Power Expense	Transmission Expense	Total Expense	Mwh's	Price/Mwh
January	14,404,003.60	1,141,865.16	15,545,868.76	379,586	\$ 40.95
February	12,624,938.32	1,064,047.97	13,688,986.29	331,522	\$ 41.29
March	12,093,948.40	1,028,436.02	13,122,384.42	333,988	\$ 39.29
April	11,778,730.24	948,421.31	12,727,151.55	313,697	\$ 40.57
May	11,927,839.36	978,709.95	12,906,549.31	292,372	\$ 44.14
June	13,430,320.72	1,448,421.83	14,878,742.55	332,335	\$ 44.77
July	15,707,194.72	1,171,022.75	16,878,217.47	410,180	\$ 41.15
August	16,042,233.76	1,269,251.64	17,311,485.40	460,333	\$ 37.61
September	12,795,394.24	1,046,721.09	13,842,115.33	322,050	\$ 42.98
October	11,352,031.36	808,505.66	12,160,537.02	303,391	\$ 40.08
November	11,769,847.84	905,767.05	12,675,614.89	258,041	\$ 49.12
December	13,363,874.08	989,489.24	14,353,363.32	355,306	\$ 40.40
<b>Total</b>	<b>\$ 157,290,356.64</b>	<b>\$ 12,800,659.67</b>	<b>\$ 170,091,016.31</b>	<b>4,092,801</b>	<b>\$ 41.56</b>

2004	Purchased Power Expense	Transmission Expense	Total Expense	Mwh's	Price/Mwh
January	14,293,738.24	1,029,157.58	15,322,895.82	381,685	\$ 40.15
February	12,742,888.72	931,163.27	13,674,051.99	343,584	\$ 39.80
March	12,416,809.12	889,319.05	13,306,128.17	337,299	\$ 39.45
April	11,161,721.44	828,966.20	11,990,687.64	278,403	\$ 43.07
May	13,638,472.00	1,091,213.63	14,729,685.63	345,796	\$ 42.60
June	15,053,373.28	1,540,902.39	16,594,275.67	380,216	\$ 43.64
July	15,572,476.00	1,588,441.69	17,160,917.69	398,896	\$ 43.02
August	15,809,887.92	1,623,182.38	17,432,870.30	403,615	\$ 43.19
September	14,078,746.72	1,421,032.50	15,499,779.22	353,695	\$ 43.82
October	12,024,709.84	1,091,426.82	13,116,136.66	321,826	\$ 40.76
November	11,709,945.28	1,153,880.88	12,863,826.16	307,694	\$ 41.81
December	13,994,724.16	1,394,495.04	15,389,219.20	365,824	\$ 42.07
<b>Total</b>	<b>\$ 162,497,292.72</b>	<b>\$ 14,583,181.43</b>	<b>\$ 177,080,474.15</b>	<b>4,218,533</b>	<b>\$ 41.98</b>



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-007**

**REQUEST:**

7. Provide the most current base case and high case demand and energy forecasts for the period 2005 through 2025, if available. If the current forecast does not extend to 2025, provide forecast data for the longest forecast period available. The information should be disaggregated into (a) native load, firm and non-firm demand; and (b) off-system load, both firm and non-firm demand.

**RESPONSE:**

Please see the attachment to KyPSC-INT-01-007. ULH&P does not serve any off-system load.

**WITNESS RESPONSIBLE:** James A. Riddle

The Union Light, Heat and Power Company  
Electric Demand Forecast - Mw

	Base	High
2005	914	917
2006	930	935
2007	949	957
2008	963	973
2009	972	984
2010	981	995
2011	991	1,008
2012	1,001	1,020
2013	1,010	1,032
2014	1,020	1,044
2015	1,030	1,057
2016	1,039	1,069
2017	1,048	1,081
2018	1,058	1,094
2019	1,067	1,106
2020	1,076	1,119
2021	1,082	1,128
2022	1,091	1,141
2023	1,098	1,152
2024	1,108	1,166
2025	1,116	1,178

The Union Light, Heat and Power Company  
Electric Energy Forecast - Mwh

	Base	High
2005	4,102,163	4,118,753
2006	4,183,880	4,208,577
2007	4,300,876	4,338,626
2008	4,368,052	4,416,467
2009	4,414,119	4,471,794
2010	4,459,731	4,528,474
2011	4,509,460	4,590,240
2012	4,555,016	4,648,734
2013	4,601,401	4,708,584
2014	4,649,430	4,769,813
2015	4,696,374	4,830,847
2016	4,744,177	4,893,183
2017	4,785,816	4,949,886
2018	4,834,563	5,014,634
2019	4,880,419	5,077,496
2020	4,925,485	5,140,419
2021	4,956,884	5,189,305
2022	5,000,746	5,252,243
2023	5,035,698	5,306,991
2024	5,084,244	5,375,927
2025	5,121,407	5,434,378

The Union Light, Heat and Power Company  
Off System Electric Energy Forecast - Mwh  
Non-Firm

	Base	High
2005	115,310	NA
2006	113,597	NA
2007	135,257	NA
2008	130,376	NA
2009	134,715	NA

Note: Assumes ULH&P obtains generation assets on April 1, 2005.

Note: Projected non-firm sales, dependent upon market demand.



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-008**

**REQUEST:**

8. Provide the target reserve margin currently used for planning purposes, stated as a percentage of demand, and a summary of your utility's most recent reserve margin study. If this target reserve margin has changed since 2002, provide the prior target reserve margin and explain the reasons for the change. If the target reserve margin is expected to be reevaluated in the next 3 years, explain the reasons for the reevaluation.

**RESPONSE:**

ULH&P is continuing to use a target reserve margin based on the following components, as explained in more detail in previous responses and in ULH&P's 2003 IRP filing:

- Operating Reserve (total of 4%):
  - one (1) percent of the projected peak load as "Load and Frequency Regulation Reserve" – to provide "on-line" generation for load and frequency regulation
  - one and one-half (1½) percent of the projected peak load as "Spinning Reserve" – which is required to be "on-line" and capable of being supplied within ten minutes, and
  - one and one-half (1½) percent of the projected peak load as "Supplemental Reserve" – which is required to be capable of being supplied to the system within ten minutes from "on-line" or "off-line" resources.
- Unscheduled Outages (greater of 8% or the loss of largest unit for which there is no back-up supply agreement (*i.e.*, 83.4 MW))
- Weather-induced load forecast uncertainty (3%)

ULH&P does not have a reserve margin study.

Using the current load forecast, the result is a target reserve margin of 16.2% in 2005, gradually decreasing as ULH&P's load grows (and the loss of the largest unit represents a smaller percentage of that load) to the minimum 15% level by 2020.

**WITNESS RESPONSIBLE:** Diane L. Jenner



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-009**

**REQUEST:**

9. For the period 2005 through 2025, provide projected reserve margins stated in megawatts ("MW") and as a percentage of demand. Identify projected deficits and current plans for addressing these deficits.

**RESPONSE:**

Assuming that the acquisition of East Bend, Miami Fort 6, and Woodsdale 1-6 receive the remaining approvals required and the plants are transferred by Summer 2005, the projected reserve margins for ULH&P are shown in Attachment KyPSC-INT-01-009. This attachment assumes the addition of capacity and short-term purchases to fill any capacity deficits and meet the reserve margin criteria. Since the first capacity addition is not until 2013, there are no firm plans for this capacity at this time and ULH&P's needs will continue to be reassessed. See response to KyPSC-INT-01-011 for more information concerning the capacity additions.

**WITNESS RESPONSIBLE:** Diane L. Jenner

**ULH&P**  
**SUPPLY VS. DEMAND BALANCE**  
With East Bend, Miami Fort 6, and Woodstate  
(Summer Capacity and Loads)

YEAR	INITIAL CAPACITY	SHORT TERM PURCH.	INCR. CAPACITY ADDITIONS	INCR. CAPACITY RETIRE./DERATES	COGEN. CAPACITY	TOTAL CAPACITY	PEAK LOAD	INCR. DSM <sup>a</sup>	DLC/RT/ CALLOPTION	INDUSTRIAL INTER./AS AVAIL LOAD	FIRM SALES	NET LOAD	RES. MAR. (%)	RES. MAR. (MW)	RES. CRITERION <sup>b</sup> (%)	RM CRITERION <sup>b</sup> (MW)	MW TO ADD TO MEET RM
2005	1077	0	0	0	0	1077	914	-0.6	-7	-3	0	903	19.2	174	16.2	147	-27
2006	1077	0	0	0	0	1077	930	-0.9	-10	-3	0	916	17.5	161	16.1	148	-13
2007	1077	4	0	0	0	1081	949	-1.2	-13	-3	0	932	16.0	149	15.9	149	0
2008	1077	15	0	0	0	1092	963	-1.5	-16	-3	0	942	15.9	150	15.8	149	0
2009	1077	21	0	0	0	1098	972	-1.9	-19	-3	0	948	15.8	150	15.8	150	0
2010	1077	27	0	0	0	1104	981	-2.2	-22	-3	0	954	15.7	150	15.7	150	0
2011	1077	34	0	0	0	1111	991	-2.5	-25	-3	0	960	15.7	151	15.7	151	0
2012	1077	41	0	0	0	1118	1001	-2.9	-28	-3	0	967	15.6	151	15.6	151	0
2013	1077	28	23	0	0	1128	1010	-3.2	-28	-3	0	976	15.6	152	15.5	152	0
2014	1100	38	0	0	0	1138	1020	-3.5	-28	-3	0	985	15.5	153	15.5	152	0
2015	1100	13	35	0	0	1148	1030	-3.8	-28	-3	0	995	15.4	153	15.4	153	0
2016	1135	23	0	0	0	1158	1039	-4.2	-28	-3	0	1004	15.4	154	15.3	154	0
2017	1135	32	0	0	0	1167	1048	-4.5	-28	-3	0	1013	15.3	154	15.2	154	0
2018	1135	42	0	0	0	1177	1058	-4.8	-28	-3	0	1022	15.1	155	15.2	155	0
2019	1135	20	31	0	0	1186	1067	-5.1	-28	-3	0	1031	15.0	155	15.1	155	0
2020	1166	30	0	0	0	1196	1076	-5.5	-28	-3	0	1040	15.1	156	15.0	156	0
2021	1166	15	21	0	0	1202	1082	-5.8	-28	-3	0	1045	15.0	157	15.0	157	0
2022	1187	25	0	0	0	1212	1091	-6.1	-28	-3	0	1054	15.0	158	15.0	158	0
2023	1187	11	22	0	0	1220	1098	-6.4	-28	-3	0	1061	15.0	159	15.0	159	0
2024	1209	22	0	0	0	1231	1108	-6.8	-28	-3	0	1070	15.0	161	15.0	161	0
2025	1209	31	0	0	0	1240	1116	-7.1	-28	-3	0	1078	15.0	162	15.0	162	0

<sup>a</sup> Not included in load forecast

<sup>b</sup> East Bend and Miami Fort 6 have back-up contracts, so Reserve Margin Criterion is the greater of 15% or 7% plus reserving for the loss of the largest unit



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-010**

**REQUEST:**

10. Provide the following information for every generation station operated in Kentucky.
  - a. Name.
  - b. Location (including county).
  - c. Number of units.
  - d. Date in service for each unit.
  - e. Type of fuel for each unit.
  - f. Net rating (MW) for each unit.
  - g. Emission control equipment in service (list by type).
  - h. Date emission control equipment in service.

**RESPONSE:**

- a. East Bend
- b. Near the Village of Rabbit Hash, KY (Boone County)
- c. 1
- d. March 1981
- e. Coal
- f. 600 MW Total, 414 MW ULH&P share
- g. Scrubber- in service March 1981  
Electrostatic Precipitator- in service March 1981  
Cooling Tower- in service March 1981  
Low NO<sub>x</sub> Burner – in service date not available  
SCR- in service May 2002
- h. See response to KyPSC-INT-01-010(g).

**WITNESS RESPONSIBLE:** Diane L. Jenner



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-011**

**REQUEST:**

11. Provide a summary of any planned base load or peaking capacity additions to meet native load requirements in the years 2005 through 2025. Include capacity additions by the utility, and those by affiliates, if constructed in Kentucky or intended to meet load in Kentucky.

**RESPONSE:**

See Attachment KyPSC-INT-01-011. There are no firm plans for any of the capacity additions shown beyond 2005. Purchases from the market may also be used to meet ULH&P's reserve margin criteria (see response to KyPSC-INT-01-009). Since the first capacity addition after 2005 is not until 2013, ULH&P's needs will continue to be reassessed.

**WITNESS RESPONSIBLE:** Diane L. Jenner

**ULH&P Unit Additions  
2005-2025**

Year	Unit Additions <sup>1,2</sup>
2005	East Bend 2 (414 MW) Miami Fort 6 (163 MW) Woodsdale 1-6 (500 MW)
2006	
2007	
2008	
2009	
2010	
2011	
2012	
2013	14.12% of 163 MW CT (23 MW)
2014	
2015	6.7% of 516MW GCC (35 MW)
2016	
2017	
2018	
2019	6.26% of 500 MW IGCC (31 MW)
2020	
2021	12.7% of 163 MW CT (21 MW)
2022	
2023	13.52% of 163 MW CT (22 MW)
2024	
2025	

<sup>1</sup> There are no firm plans for the capacity additions beyond 2005

<sup>2</sup> Capacity shown denotes summer ratings



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-012**

**REQUEST:**

12. What is the estimated capital cost per KW and energy cost per kWh for new generation by technology?

**RESPONSE:**

**CONFIDENTIAL PROPRIETARY TRADE SECRET**

The attachments to this response will be provided to any party to the case who has signed a confidentiality agreement with the Company.

**WITNESS RESPONSIBLE:** Diane L. Jenner



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-013**

**REQUEST:**

13. If current plans for addressing projected capacity deficits include the addition of gas-fired generation, describe the extent to which fluctuations in natural gas prices have been incorporated into these plans. Explain how fluctuations in natural gas prices have been incorporated into these plans. Explain how fluctuations in natural gas prices may have altered the results of previous plans.

**RESPONSE:**

As stated in the response to KyPSC-INT-01-011, ULH&P does not have any firm plans for the addition of new capacity shown beyond 2005. ULH&P will continue to reassess its capacity needs in the future. Typically, sensitivities are run using gas prices that are higher and/or lower than under Base Case conditions to assess the robustness of the plan chosen. This was also done in preparation of the 2003 IRP. While the plan chosen, which included the transfer of Woodsdale 1-6 (gas-fired peaking units) to ULH&P, cost more under higher gas prices and cost less under lower gas prices (as expected), it was determined to be robust across all sensitivities.

**WITNESS RESPONSIBLE:** Diane L. Jenner



**KyPSC Staff First Set Interrogatories  
ULH&P Case No. 2005-00090  
Date Received: March 10, 2005  
Response Due Date: March 31, 2005**

**KyPSC-INT-01-014**

**REQUEST:**

14. Provide a summary of any permanent reductions in utilization of generation capacity due to Clean Air Act compliance from 2000 through 2004. Identify and describe any forecasted reductions during the 2005 through 2025 period.

**RESPONSE:**

ULH&P does not currently own any generation, so there were no permanent reductions in utilization of generation capacity due to Clean Air Act compliance from 2000 to 2004.

There are currently no forecasted reductions in capacity for the 2005 through 2025 period for East Bend 2, Miami Fort 6, or Woodsdale 1-6.

**WITNESS RESPONSIBLE:** Diane L. Jenner



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-015**

**REQUEST:**

15. Provide a summary of all forced outages and generating capacity retirements occurring during the years 2000 through 2004.

**RESPONSE:**

Not applicable since ULH&P does not currently own any generation.

**WITNESS RESPONSIBLE:** Diane L. Jenner



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-016**

**REQUEST:**

16. Provide a summary of the utility's plans for the retirement of existing generating capacity during the 2005 through 2025 period.

**RESPONSE:**

ULH&P currently has no plans for the retirement of East Bend 2, Miami Fort 6, or Woodsdale 1-6.

**WITNESS RESPONSIBLE:** Diane L. Jenner



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-017**

**REQUEST:**

17. Provide a summary description of your utility's existing demand-side management ("DSM") programs, which includes:
- a. Annual DSM budget.
  - b. Demand and energy impacts.
  - c. The currently scheduled termination dates for the programs.

**RESPONSE:**

On September 30, 2004, ULH&P with the consensus of the Residential Collaborative and a new Commercial and Industrial ("C&I") Collaborative filed an annual status report and proposed the implementation of several new DSM programs. These new programs would be in addition to the existing set of programs. On February 14, 2005, the Kentucky Public Service Commission approved ULH&P's application for the DSM programs.

A brief description of each program is provided below.

**Residential Conservation and Energy Education (Low-Income Weatherization)**

The Residential Conservation and Energy Education (RCEE) program was designed by the ULH&P Residential DSM Collaborative to help the Company's income-qualified customers reduce their energy consumption and lower their energy costs. This program specifically focuses on Low Income Home Energy Assistance Program (LIHEAP) customers that meet the income qualification level of 150% of federal poverty level. This program uses the LIHEAP intake process as well as other community outreach to improve participation. The RCEE program provides direct installation of weatherization and energy-efficiency measures and educates ULH&P's income-qualified customers about their energy usage and other opportunities to reduce energy consumption and lower their costs.

**Refrigerators (part of RCEE)**

To increase the cost-effectiveness of this program and to provide more savings and bill control for the customer, the Residential Collaborative and ULH&P proposed in the September 27, 2002 filing in Case No. 2002-358 and subsequently received approval to expand this program to include refrigerators as a qualified measure in owner-occupied homes. Refrigerators consume a very large amount of electricity within the home.

Through replacement of poor-performing units, customers can save an average of \$96 per year. To determine replacement, the program weatherization provider performs a two-hour meter test of the existing refrigerator unit. If it is a high-energy consuming unit as determined by this test, the unit is replaced. From July 2003 to June 2004, the program replaced 65 refrigerators after the two-hour test. The average unit replaced consumes 1,620 kWh per year. Replacing with a new Energy Star qualified refrigerator, which uses approximately 400 kWh, results in an overall savings to the average customer of 1,200 kWh per year. The program replaces 22% of the units tested. Due to the higher proportion of rental properties in Kentucky, this replacement rate is less than expected based on Cinergy's experience with this program in Ohio. Old refrigerators removed from the home are destroyed in an environmentally appropriate manner to assure that the units are not used as a second refrigerator in the home or do not end up in the secondary appliance market.

### **Residential Home Energy House Call**

The Home Energy House Call (HEHC) program consists of three major components:

- Home Energy Survey
- Comprehensive Energy Audit & Review
- Measure Installation Opportunity

When a customer requests a HEHC service, a qualified home energy specialist visits the home to gather information about household energy usage. A questionnaire about the energy usage, including appliance efficiencies, is completed. The specialist performs a walk-through audit and checked the home for air infiltration, inspects the HVAC filter, and surveys the insulation levels in different areas of the home. A detailed report is generated on site that explains how energy is used each month and a list of prioritized action items is compiled based on energy savings and costs. The audit provides a strong focus on the building envelope and includes installation of several energy saving measures at no cost to the customer. The measures include a low-flow showerhead, two aerators, outlet gaskets, two compact fluorescent bulbs, and a motion sensor night-light. Customers can begin realizing an immediate savings on their electric bill by participating in the program.

### **Residential Comprehensive Energy Education (NEED)**

This energy education program was developed by the Residential DSM Collaborative and implemented in late 1997. The contract for implementation of this program was awarded to Kentucky NEED. NEED was launched in 1980 to promote student understanding of the scientific, economic, and environmental impacts of energy. The program is currently available in 46 states, the U.S. Virgin Islands, and Guam.

The program has provided unbiased educational information on all energy sources, with an emphasis on the efficient use of energy. Energy education materials, emphasizing cooperative learning, are provided to teachers. Leadership Training Workshops are

structured to educate teachers and students to return to their schools, communities, and families to conduct similar training and to implement behavioral changes that reduce energy consumption. Educational materials and Leadership Training workshops are designed to address students of all aptitudes and have been provided for students and teachers in grades K through 12.

The Kentucky NEED program follows national guidelines for materials used in teaching, but also offers additional services such as: hosting teacher/student workshops, sponsoring teacher attendance at summer training conferences, sponsoring attendance at a National Youth Awards Conference for award-winning teachers and students, and providing curricula, free of charge, to teachers.

Since October 1999, 545 teachers enrolled in the program, 296 teachers attended teacher workshops and over 2,300 students attended workshops. Overall, the program has reached teachers and students in 71 schools in the six counties served by ULH&P. There are currently 131 teachers enrolled in the program. These teachers impact approximately 3,500 students per year. In addition, many of the teachers have multiple classes, so the number is potentially higher. Students who attend workshops are encouraged to mentor other students in their schools – further spreading the message of energy conservation. Teams of high school students serve as facilitators at workshops. Through this approach, all grade levels are either directly or indirectly presented the energy efficiency and conservation message. Several of the student teams have made presentations to community groups, sharing their knowledge of energy, promoting energy conservation and demonstrating that the actions of each person impact energy efficiency. It is intended that these students will also share this information with their families and reduce consumption in their homes.

Due to efforts of the Kentucky NEED program, the Kentucky Division of Energy has been awarded a Special Projects grant from the U.S. Department of Energy. This Rebuild Kentucky project, which began in January 2002, established a new partnership to implement an EnergySmart Schools program in six Northern Kentucky counties. Kentucky NEED is a cost-sharing partner in this project. The program addresses: 1) building energy efficiency improvements through retrofits, financed by use of energy saving performance contracts (ESPC) and improved new construction; 2) school transportation practices; 3) educational programs; 4) procurement practices; and 5) linkages between school facilities and activities within the surrounding community. Successful EnergySmart schools program elements will be marketed to other schools statewide.

A recent improvement to the program is the addition of energy savings “kits” as a teaching tool. These kits include actual weatherization and conservation measures for the students to install in their homes to get their families directly involved in application of conservation concepts. The students track the measures utilized in the homes and the results are collected by ULH&P to track impacts and results of the education. The actual installation of measures helps increase the directly measurable savings from this program and should increase cost-effectiveness. The Residential Collaborative recommended and

received approval to include 500 kits for inclusion in the energy curriculum of selected classrooms to increase savings and to improve tracking. These kits were tested in the spring of 2003 and full implementation started in the fall of 2003, when the science curriculum deals with these issues. Fourteen teachers and 309 students in Kenton County participated in the fall 2003 Pilot Project utilizing the kits. Feedback received was very favorable, with teachers finding great value in the lessons presented and the energy efficiency kits. The program is being expanded to cover Boone County Schools as well as Kenton County Schools. Kentucky NEED is currently meeting with the 2004 participants and will facilitate implementation of the 2004 project this fall.

### **Pilot Program: Energy Education and Bill Assistance (Payment Plus)**

ULH&P and the Northern Kentucky Community Action, Inc. (NKCAC) implemented a pilot home energy assistance program, Home Energy Assistance Plus. This pilot program is structured to test and evaluate the process and design of a home energy assistance program. The pilot program is designed to impact participants' behavior (*e.g.*, encourage meeting utility bill payments as well as eliminate arrearages) and to generate energy conservation impacts.

The pilot program has three parts:

1. Energy & Budget Workshops – to help customers understand how to control their energy usage and how to manage their household bills, two workshops were held for each round of pilot participants.
2. Weatherization – participants in this program have their homes weatherized as part of the normal Residential Conservation and Energy Education (low-income weatherization) program unless weatherized in past program years or permission could not be acquired from the property owner in rental situations.
3. Bill Assistance – to provide an incentive for these customers to participate in the education and weatherization, and to help them get control of their bills, payment assistance credits are provided to each customer as they complete the other aspects of the program.

### **Power Manager (Residential)**

The purpose of the Power Manager program is to reduce demand by controlling residential air conditioning usage during peak demand conditions in the summer months. The program is offered to residential customers with central air conditioning. ULH&P attaches a load control device to the customer's compressor to enable ULH&P to cycle the customer's air conditioner off and on when the load on ULH&P's system reaches peak levels. Customers receive financial incentives for participating in this program based upon the cycling option selected.

The cycling of the customer's air-conditioning system will have minimal impact on the operation of the air-conditioning system or on the customer's comfort level. The load control device has built-in safeguards to prevent the "short cycling" of the air-

conditioning system. The air-conditioning system will always run the minimum amount of time required by the manufacturer. The cycling simply causes the air-conditioning system to run less which is no different than what it does on milder days.

The initial design of Power Manager has been structured on the same basic principles as ULH&P's innovative PowerShare<sup>®</sup> program. Power Manager will couple direct load control with a flavor of "real-time pricing" through the Variable Daily Event Incentive structure as described above. By implementing the Variable Daily Event Incentive structure, ULH&P can educate customers on the real time cost of electricity. ULH&P will continue to explore opportunities to cross-market the Power Manager program with ULH&P's other DSM programs thus tying both conservation and peak load management together as one package.

### **Energy Star Products (Residential)**

The Energy Star Products program provides market incentives and market support through retailers to build market share and usage of Energy Star products. Special incentives to buyers and in-store support stimulate demand for the products and make it easier for store participation.

The first year of the program will focus on compact fluorescent lamps (bulbs) and torchiere lamps. There are several barriers addressed through the program. The first is price. Purchase rewards are provided for customers to lower first cost of the item and stimulate interest. The second barrier is retailer participation. Through retail education, in-field sales support (signs, ads, *etc.*), and stimulated market demand retailers stock more product, provide special promotions and plan sales strategies around these Energy Star products. Additional support is provided through manufacturer relationships that often can reduce prices through special large-scale purchases. Coordination will occur with the national Energy Star initiatives such as "Change a Light, Change the World" promotion.

Incentives or "customer rewards" will be available in two ways, through mail-in forms available from the retailer and through special in-store "Instant Reward" events that occur in stores at the time of purchase.

### **Energy Efficiency Website**

Energy Zone<sup>™</sup> is ULH&P's enhanced energy efficiency website. It provides ULH&P customers the most advanced programs, tools, and measures available to manage their energy and achieve load impacts. The website features a multi-tiered design providing the consumer the opportunity to receive quick customized energy tips and, if they choose, the ability to complete an online audit and receive ten self-install energy efficiency measures. With over 70% of ULH&P customers having access to the Internet in either their homes or at work, the target market is comprised of those individuals who do not have the time or logistically cannot be available for the HEHC audit program.

The Energy Efficiency Starter Kit provides the customer with the following measures:

- (1) 15w CFL Bulb
- (1) 20w CFL Bulb
- (1) 2.0 GPM Earth Showerhead
- (1) Dual Setting Touch Flow Kitchen Aerator with Swivel
- (1) 1.5 GPM Standard Faucet Aerator
- (1) LimeLite Nite Light
- (1) Pkg. Toilet Dye Tablets
- (2) Switch/Outlet Draft Stoppers
- (1) Energy Star Efficiency Guide

### **High Efficiency Incentive (Commercial & Industrial)**

This program provides incentives to small commercial and industrial customers to install high efficiency equipment in applications involving new construction, retrofit, and replacement of failed equipment. These incentives are selected motors, lighting equipment, space conditioning (HVAC) equipment, and processes.

The list of technologies includes refrigeration, variable frequency drives, pumps, controls, motors, lighting, and HVAC equipment. Small and medium sized commercial and industrial customers can have significant energy consumption, yet are not frequently served by the Energy Services Market. These customers lack the knowledge and/or do not understand the benefits of high efficiency alternatives. They tend to be driven by rapid return on their investments, rather than the longer pay-back periods associated with investments in higher efficiency equipment. ULH&P's program provides financial incentives to help reduce this cost differential and improve their return on investment. It also provides a market demand such that dealers and distributors or "market providers" will stock and provide higher efficiency alternatives as the demand for the products increases. ULH&P provides these distributors with additional information and support so that they better understand the best applications of these technologies.

**The response to the specific questions in Data Request 17 (a-c) is provided in the table below.**

<b>Estimated Annual Budget, Lost kWh and kW Impacts, and Program Termination Dates</b>				
	a.	b.		c.
	<b>Annual</b>	<b>kW Demand</b>	<b>kWh Energy</b>	<b>Termination</b>
<b>Residential - Current Programs/Measures</b>	<b>Budget</b>	<b>Impacts</b>	<b>Impacts</b>	<b>Dates</b>
Residential Conservation & Energy Education	\$499,800	60.0	174,000	Dec-05
Refrigerator Replacement	\$100,000	14.0	64,000	Dec-05
Home Energy House Call	\$150,000	200.0	850,000	Dec-05
Residential Comprehensive Energy Education	\$ 81,500		NA	Dec-05
Home Energy Assistance Plus (continuing)	\$ 75,000		NA	Dec-06
Power Manager	\$750,000	2,812.5	-	Dec-06
Program Development Funds	\$140,000		NA	Dec-05
<b>Residential - New Programs/Measures</b>				
Energy Star Products	\$243,000			Dec-09
CFL's (Compact Fluorescent Lights)		400.0	2,640,000	
Torchieres (Floor lamps)		45.0	194,000	
Energy Efficiency Web Site	\$ 17,850	52.5	215,250	Dec-09
<b>Small C&amp;I Programs/Measures</b>				
Lighting Measures	\$ 72,536	77	439,593	Dec-09
HVAC Measures	\$ 45,998	47	167,504	Dec-09
Motors Measures	\$ 36,809	7	131,021	Dec-09
Other Measures	\$299,620	240	1,878,620	Dec-09

**WITNESS RESPONSIBLE:** Richard G. Stevie



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-018**

**REQUEST:**

18. Provide your utility's definition of "transmission" and "distribution."

**RESPONSE:**

Transmission voltages for ULH&P consist of 69 kV networked and radial transmission circuits.

Distribution voltages for ULH&P consists of 4.3 kV and 13.2 kV. Cinergy defines transmission as facilities rated 69 kV and above and defines distribution as facilities rated below 69 kV.

**WITNESS RESPONSIBLE:** Ronald C. Snead



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-019**

**REQUEST:**

19. Identify all utilities with which your utility is interconnected and the transmission capacity at all points of interconnections.

**RESPONSE:**

The ULH&P transmission system consists of a 69 kV system primarily designed and planned to reliably serve the area load. The 69 kV system of ULH&P is connected to CG&E's 138 kV system via 138-69 kV substations. The connections to CG&E are not considered "interconnections" since CG&E and ULH&P are in the same control area. There are two interconnections at 69 kV with East Kentucky Power Cooperative (EKPC) but these were primarily built to provide alternative transmission sources to both ULH&P and EKPC to maintain reliable service to their customers in the immediate area of the interconnections. These interconnections are operated normally opened and are used only during emergency conditions (transmission outages).

**WITNESS RESPONSIBLE:** Ronald C. Snead



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-020**

**REQUEST:**

20. Provide the peak hourly MW transfers into and out of each interconnection for each month of the last 5 years. Provide the date and time of each peak.

**RESPONSE:**

The only two ULH&P interconnections are two normally open 69 kV interconnections with EKPC. These interconnections are only used during emergency conditions. See response to KyPSC-INT-01-019.

**WITNESS RESPONSIBLE:** Ronald C. Snead



**KyPSC Staff First Set Interrogatories  
ULH&P Case No. 2005-00090  
Date Received: March 10, 2005  
Response Due Date: March 31, 2005**

**KyPSC-INT-01-021**

**REQUEST:**

21. Identify any areas on your utility's system where capacity constraints, bottlenecks, or other transmission problems have been experienced from January 1, 2003 until the present date. Identify all incidents of transmission problems by date and hour, with a brief narrative description of the nature of the problem. Provide the MW transfers for each of your utility's interconnections for these times.

**RESPONSE:**

The ULH&P system consists of a 69 kV system primarily designed, planned and operated to serve the area load. The 69 kV system of ULH&P is connected to CG&E's 138 kV system via 138-69 kV substations. The connections to CG&E are not considered "interconnections" since CG&E and ULH&P are in the same control area. There are only two interconnections with another control area (EKPC) and those interconnections are operated normally open. As a result of the nature of the ULH&P transmission system, it has a very low response factor to transfers. As such, "bottlenecks and capacity constraints" resulting from MW transfers have not been experienced on the ULH&P transmission system.

**WITNESS RESPONSIBLE:** Ronald C. Snead



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-022**

**REQUEST:**

22. Provide details of any planned transmission capacity additions for the 2005 through 2025 period. If the transmission capacity additions are for existing or expected constraints, bottlenecks, or other transmission problems, identify the problem the addition is intended to address.

**RESPONSE:**

The following is a current list of planned ULH&P transmission projects.

<b>Description</b>	<b>In Service Date</b>	<b>Comments</b>
Extend and Loop 69 kV circuit through new Blackwell Substation	6-01-06	Integrate new 138-69 kV capacity into local load 69 kV system, to supply local load growth.
Reconductor sections of 69 kV circuit between Blackwell and Crittenden Substations	6-01-06	For local load growth.
Extend and Loop 69 kV circuit through new Thomas More Substation	6-01-06	For local load growth.
Extend and Loop 69 kV circuit through new Dry Ridge Substation	6-01-07	For local load growth.

**WITNESS RESPONSIBLE:** Ronald C. Snead



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-023**

**REQUEST:**

23. Is your utility researching or considering methods of increasing transmission capacity of existing transmission routes? If yes, discuss those methods.

**RESPONSE:**

As part of the normal planning process, ULH&P considers many alternatives for augmenting transmission capacity. Included in the analysis is investigation of methods to increase capacity of existing transmission routes such as the use of high temperature conductors, upgrading of existing circuits to higher voltages, reconductoring to larger conductors and any other method that becomes available.

**WITNESS RESPONSIBLE:** Ronald C. Snead



**KyPSC Staff First Set Interrogatories  
ULH&P Case No. 2005-00090  
Date Received: March 10, 2005  
Response Due Date: March 31, 2005**

**KyPSC-INT-01-024**

**REQUEST:**

24. Provide copies of any reports prepared by your utility or for your utility that analyze the capabilities of the transmission system to meet present and future needs for import and export of capacity.

**RESPONSE:**

Cinergy has not prepared any reports that specifically analyzed the capability of the ULH&P transmission system to import or export power. Since the ULH&P transmission system consists of a 69 kV system which was primarily designed and planned to reliably serve the area load and since there currently are no generation plants connected to this 69 kV system, there has not been a need to conduct such a study.

**WITNESS RESPONSIBLE:** Ronald C. Snead



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-025**

**REQUEST:**

25. Provide the following transmission energy data forecast for the years 2005 through 2025.
- a. Total energy received from all interconnections and generation sources connected to your transmission system.
  - b. Total energy delivered to all interconnections on your transmission system.
  - c. Peak demand for summer and winter seasons on your transmission system.

**RESPONSE:**

All of the energy requirements of ULH&P are provided through the connections with the CG&E 138 kV system. These are not considered interconnections since CG&E and ULH&P are in the same control area. There are only two interconnections with another control area (EKPC) and these are normally open. The forecasted energy received from interconnections is therefore zero. See response to KyPSC-INT-01-007 that relates to the forecasted values for energy for ULH&P. All of this energy is supplied from the connections to the CG&E 138 kV system.

Since ULH&P does not have any generation connected to its transmission system and since the transmission system has been designed and planned to primarily serve the area load, and since the only two interconnections are operated normally open, there is no energy delivered from the ULH&P to the interconnections.

See response to KyPSC-INT-01-007. Since ULH&P does not have any generation connected to its transmission system, the demand on the transmission system is equal to the ULH&P load requirements.

**WITNESS RESPONSIBLE:** Ronald C. Snead



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-026**

**REQUEST:**

26. Provide the yearly System Average Interruption Duration Index ("SAIDI") and the System Average Interruption Frequency Index ("SAIFI"), excluding major outages, by feeder for each distribution substation on your system for the last 5 years.

**RESPONSE:**

Please see attachment KyPSC-INT-01-026.

WITNESS RESPONSIBLE: Larry E. Conrad

Substation-Feeder	Feeder SAIDI	Feeder SAIFI
009-41	66.0	1.09
009-42	20.4	0.27
009-43	13.8	0.25
009-44	22.2	0.26
009-45	19.8	0.24
009-46	90.0	1.39
042-41	124.2	1.50
042-42	177.6	4.19
042-43	64.2	1.00
042-44	186.6	2.44
055-41	89.4	1.11
055-42	15.0	0.13
055-43	39.0	0.28
055-44	319.8	1.05
059-40	1.8	0.01
059-41	76.2	1.15
059-42	94.8	1.12
059-43	0.0	0.00
059-44	8.4	0.18
059-45	6.0	0.08
059-46	78.0	1.04
059-47	11.4	0.16
059-48	3.0	0.04
059-67	0.0	0.00
067-41	86.4	0.47
067-42	139.2	2.18
067-43	0.0	0.00
067-44	109.8	2.19
067-45	49.8	0.30
067-46	46.2	1.01
067-47	1.2	0.03
070-41	39.6	1.17
070-42	34.2	1.06
070-43	72.0	2.13
070-44	161.4	3.18
077-A	6.0	0.05
077-B	0.0	0.00
077-C	0.6	0.01
077-H	7.2	0.06
078-41	8.4	0.09
078-42	9.6	0.09
078-43	0.0	0.00
078-44	4.2	0.09
078-45	9.0	0.10
078-46	116.4	2.11
086-41	157.8	1.42
086-42	130.8	2.19
089-41	46.8	1.14
089-42	26.4	0.26
089-43	3.6	0.03

089-44	513.0	2.00
120-D	157.8	1.25
124-41	61.8	0.34
125-41	49.8	0.36
128-41	36.6	0.23
128-42	125.4	3.21
131-41	121.2	2.11
131-42	110.4	4.10
131-43	48.0	1.19
131-44	71.4	2.05
132-41	29.4	0.27
132-42	312.0	5.25
132-49	84.6	0.48
147-41	27.6	0.20
147-42	20.4	0.21
161-41	33.6	0.24
189-41	58.8	1.14
189-42	151.2	1.12
199-41	260.4	4.11
241-42	33.0	0.14
241-44	13.2	0.17
241-45	27.6	0.28
241-46	34.2	0.30
241-47	79.8	2.00
243-41	121.8	2.17
243-42	54.6	1.31
243-43	51.0	1.36
243-44	195.0	2.15
287-42	79.2	1.21
299-41	132.0	2.33
304-41	75.0	0.37
358-41	4.2	0.05

Substation- Feeder	Feeder SAIDI	Feeder SAIFI
009-41	63.6	1.14
009-42	55.2	0.64
009-43	13.2	0.15
009-44	70.8	1.19
009-45	33.6	0.52
009-46	72.0	0.82
015-24	45.0	1.00
015-41	1.8	0.02
015-46	13.8	0.15
015-48	2.4	0.04
042-41	7.8	0.06
042-42	72.6	0.73
042-44	5.4	0.01
055-41	50.4	0.46
055-42	56.4	2.12
055-43	62.4	1.10
055-44	2.4	0.01
059-40	43.8	1.70
059-41	50.4	2.21
059-42	102.6	2.76
059-43	32.4	1.91
059-44	24.0	0.29
059-45	574.8	2.90
059-46	112.2	3.03
059-47	49.8	3.14
059-48	31.8	1.00
059-67	0.0	0.00
067-41	0.0	0.00
067-42	7.8	0.07
067-43	10.8	0.06
067-44	109.2	0.90
067-45	72.6	0.69
067-46	21.0	1.07
067-47	16.8	0.15
070-41	18.6	0.21
070-42	91.2	1.92
070-43	114.6	1.42
070-44	78.0	0.20
077-A	216.0	1.75
077-B	100.8	1.00
077-C	112.2	1.04
077-H	55.8	1.26
078-41	73.2	0.80
078-42	1.2	0.00
078-43	598.8	1.52
078-44	7.2	0.10
078-45	4.2	0.06
078-46	61.8	1.31
086-41	392.4	2.81
086-42	86.4	0.88

089-41	31.8	0.22
089-42	28.8	0.22
089-43	1.8	0.02
089-44	102.6	1.74
120-D	47.4	0.91
124-41	652.2	5.63
125-41	256.2	3.71
128-41	133.2	2.27
128-42	127.8	1.89
131-41	7.8	0.15
131-42	66.6	0.35
131-43	100.2	1.23
131-44	38.4	0.93
132-41	32.4	0.22
132-42	40.8	0.98
132-49	38.4	0.35
147-41	103.8	1.21
147-42	139.2	0.65
147-43	141.6	1.10
152-41	94.2	1.00
152-42	160.2	2.04
161-41	523.8	2.52
189-41	8.4	0.05
189-42	108.6	2.33
199-41	204.6	1.17
199-42	162.0	2.08
205-41	669.6	2.23
225-A	4.2	0.04
225-B	0.0	0.00
225-C	0.6	0.00
241-41	0.0	0.00
241-42	4.2	0.08
241-43	108.6	1.25
241-44	9.6	0.09
241-45	33.0	0.53
241-46	147.0	2.50
241-47	290.4	2.07
243-41	117.0	2.47
243-42	17.4	0.17
243-43	243.0	1.44
243-44	235.8	3.59
287-41	0.0	0.00
287-42	11.4	0.66
299-41	44.4	0.37
304-41	536.4	4.31
358-41	131.4	3.21

Substation- Feeder	Feeder SAIDI	Feeder SAIFI
009-41	86.4	1.44
009-42	28.8	0.20
009-43	7.2	0.13
009-44	24.6	0.17
009-45	16.2	0.28
009-46	54.6	1.76
015-41	4.2	0.02
015-46	58.2	0.27
015-48	5.4	0.12
042-41	145.2	1.85
042-42	325.2	5.24
042-43	0.0	0.00
042-44	1.2	0.01
055-41	4.2	0.08
055-42	4.8	0.11
055-43	94.2	1.56
055-44	21.0	0.19
059-40	59.4	1.87
059-41	26.4	1.01
059-42	274.8	3.27
059-43	283.8	2.66
059-44	391.2	4.16
059-45	300.6	3.21
059-46	271.8	3.48
059-47	84.6	2.23
059-48	76.8	1.95
067-41	36.6	1.06
067-42	0.0	0.00
067-43	0.0	0.00
067-44	108.0	1.46
067-45	273.6	1.94
067-46	4.2	0.04
067-47	117.0	2.23
070-41	47.4	0.35
070-42	84.0	1.33
070-43	265.2	4.04
070-44	105.6	0.60
077-A	0.6	0.01
077-B	124.2	1.98
077-C	129.0	2.01
077-H	16.2	0.89
078-41	49.8	1.28
078-42	21.6	0.08
078-43	62.4	1.07
078-44	10.2	0.23
078-45	28.8	1.12
078-46	154.2	3.51
086-41	96.0	1.41
086-42	179.4	1.49
089-41	22.2	0.41

089-42	37.2	0.32
089-43	64.8	1.06
089-44	46.8	0.90
120-D	87.0	1.78
124-41	373.2	3.57
125-41	421.2	4.17
128-41	68.4	0.54
128-42	20.4	0.11
131-41	63.6	0.43
131-42	13.8	0.14
131-43	196.2	3.46
131-44	1.8	0.01
132-41	18.6	0.37
132-42	54.0	1.21
132-49	91.8	1.08
143-41	0.6	0.00
147-41	194.4	1.72
147-42	48.6	0.29
152-41	158.4	1.75
152-42	56.4	1.03
161-41	177.0	2.00
189-41	66.0	0.85
189-42	235.8	2.21
189-43	0.0	0.00
199-41	145.8	1.63
199-42	444.6	2.53
205-41	9.6	0.08
225-A	55.8	1.54
225-B	48.0	1.06
225-C	24.6	0.94
241-41	0.0	0.00
241-42	7.8	0.05
241-44	15.6	0.13
241-45	16.2	0.16
241-46	34.2	0.30
241-47	60.6	0.28
243-41	124.8	0.59
243-42	7.2	0.10
243-43	126.6	0.98
243-44	87.6	1.40
287-42	45.6	1.08
289-41	23.4	1.07
299-41	112.2	1.27
304-41	181.2	1.31
310-41	0.0	0.00
358-41	50.4	1.13

Substation-Feeder	Feeder SAIDI	Feeder SAIFI
009-41	57.0	0.29
009-42	150.0	2.59
009-43	268.2	2.50
009-44	76.2	0.43
009-45	0.6	0.00
009-46	49.8	0.45
015-41	255.6	1.11
015-46	1.2	0.01
015-48	0.0	0.01
042-41	177.0	1.13
042-42	9.0	0.04
042-43	3.0	0.09
042-44	45.6	1.27
055-41	160.2	3.31
055-42	117.6	2.40
055-43	77.4	2.32
055-44	86.4	3.18
059-40	199.2	2.97
059-41	69.0	1.00
059-42	144.6	1.18
059-43	19.8	0.37
059-44	76.8	2.10
059-45	75.6	2.09
059-46	252.6	2.74
059-47	10.8	0.14
059-48	0.0	0.00
067-41	21.6	0.34
067-42	0.6	0.01
067-43	9.6	0.09
067-44	116.4	1.55
067-45	46.2	0.92
067-47	236.4	1.77
070-41	143.4	2.67
070-42	126.6	1.41
070-43	57.0	2.56
070-44	63.6	0.46
077-B	0.0	0.00
077-C	45.6	0.64
077-H	44.4	0.84
078-41	58.8	0.25
078-42	4.2	0.08
078-43	1.8	0.03
078-44	21.0	0.11
078-45	37.8	1.13
078-46	23.4	0.62
086-41	197.4	1.59
086-42	93.0	1.24
089-41	18.6	0.40
089-42	9.6	0.16
089-43	1.8	0.02

120-D	85.2	1.49
124-41	531.6	6.74
125-41	133.2	2.56
128-41	93.6	1.12
128-42	24.6	0.65
131-41	23.4	0.21
131-42	12.6	0.11
131-43	123.0	2.06
131-44	2.4	0.03
132-41	4.8	0.35
132-42	40.2	1.17
132-49	186.6	1.19
143-41	0.0	0.00
147-41	272.4	1.44
147-42	136.8	0.98
147-43	294.0	2.00
152-41	96.6	1.34
152-42	168.0	2.82
161-41	139.8	1.70
189-41	21.6	0.35
189-42	103.2	0.73
199-41	88.8	2.28
199-42	196.2	3.87
199-43	72.0	1.42
205-41	215.4	2.21
210-041	88.8	1.04
210-042	25.2	0.21
225-A	0.0	0.00
225-B	20.4	0.19
241-41	192.6	1.41
241-42	151.8	2.13
241-43	456.6	4.33
241-44	453.6	1.15
241-45	192.6	3.24
241-46	325.2	3.63
241-47	0.0	0.00
243-41	25.2	0.37
243-42	49.2	0.20
243-43	26.4	0.28
243-44	73.2	0.71
287-42	20.4	0.14
289-41	40.8	0.42
299-41	243.0	2.44
304-41	169.2	2.38
358-41	141.0	0.43

Substation-Feeder	Feeder SAIDI	Feeder SAIFI
009-41	22.2	0.21
009-42	30.0	0.42
009-43	111.6	2.32
009-44	229.2	3.70
009-45	15.6	0.25
009-46	240.6	1.45
015-24	82.8	1.00
015-41	286.8	2.26
015-48	22.2	0.28
042-41	75.6	0.78
042-42	90.6	0.88
042-44	26.4	0.29
055-41	19.8	0.26
055-42	67.8	1.17
055-43	123.6	1.50
055-44	84.6	0.93
059-40	1.2	0.08
059-41	16.2	0.30
059-42	16.2	0.22
059-43	16.8	0.12
059-44	17.4	0.82
059-45	235.8	4.23
059-46	51.0	0.24
059-47	121.8	1.23
059-48	184.2	1.01
067-41	33.0	1.22
067-42	1.2	0.01
067-43	0.6	0.00
067-44	25.2	0.30
067-45	97.2	1.41
067-46	0.6	0.01
067-47	8.4	0.09
070-41	43.2	0.38
070-42	115.8	1.59
070-43	85.8	0.73
070-44	8.4	0.08
077-B	2.4	0.04
077-C	0.6	0.01
077-H	6.6	0.06
078-41	207.6	3.04
078-42	87.0	1.19
078-43	33.6	0.41
078-44	46.2	0.56
078-45	132.6	2.26
078-46	98.4	1.21
086-41	287.4	3.61
086-42	43.8	0.22
089-41	0.0	0.00
089-42	16.8	0.41
089-43	3.6	0.16

120-D	116.4	0.95
124-41	67.8	0.91
124-42	163.8	2.52
125-41	67.8	0.97
128-41	45.6	1.28
128-42	11.4	0.98
128-43	66.0	2.12
128-44	4.8	0.06
128-45	24.0	1.00
131-41	13.2	0.26
131-42	4.2	0.03
131-43	127.2	2.44
131-44	0.6	0.03
132-41	21.0	0.18
132-42	297.6	4.80
132-49	79.2	0.44
147-41	99.6	1.06
147-42	221.4	2.44
147-43	0.0	0.00
151-524	88.8	1.00
152-41	74.4	1.72
152-42	11.4	0.09
161-41	24.6	0.28
189-41	76.8	1.41
189-42	64.8	0.66
189-43	0.0	0.00
199-41	90.0	0.96
199-42	88.8	1.25
199-43	0.6	0.00
205-41	30.6	0.21
210-041	1.2	0.01
210-042	111.0	1.24
225-A	77.4	1.20
225-B	103.8	1.15
225-C	59.4	0.72
241-41	98.4	0.18
241-42	87.6	0.80
241-43	0.0	0.00
241-44	0.0	0.00
241-45	63.0	0.68
241-46	42.0	0.51
241-47	16.8	0.40
243-41	21.0	0.31
243-42	34.8	0.30
243-43	18.0	0.16
243-44	79.8	2.29
287-42	45.0	0.18
289-41	19.8	0.17
289-42	24.0	1.00
299-41	195.6	1.87
304-41	106.2	0.64
358-41	118.8	1.28



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-027**

**REQUEST:**

27. Provide the yearly SAIDI and SAIFI, including major outages, by feeder for each distribution substation on your system for the last 5 years. Explain how you define major outages.

**RESPONSE:**

A major outage is any Level 3 or Level 4 storm as defined by Storms and natural Disasters Plan. These are typically characterized as situations where damage to the electric system will cause many customers to be without service more than a day, extensive use of crews, non-traditional resources, and mutual assistance in some cases.

Please see attachment KyPSC-INT-01-027.

**WITNESS RESPONSIBLE:** Larry E. Conrad

Substation-Feeder	Feeder SAIDI	Feeder SAIFI
009-41	70.2	1.12
009-42	49.8	0.31
009-43	13.8	0.25
009-44	24.0	0.28
009-45	19.8	0.24
009-46	94.8	1.40
042-41	124.2	1.50
042-42	280.2	5.21
042-43	64.2	1.00
042-44	186.6	2.44
055-41	94.8	1.13
055-42	16.8	0.15
055-43	53.4	0.35
055-44	319.8	1.05
059-40	122.4	1.01
059-41	97.2	1.19
059-42	105.0	1.14
059-43	0.0	0.00
059-44	8.4	0.18
059-45	105.6	1.10
059-46	95.4	1.07
059-47	11.4	0.16
059-48	3.0	0.04
059-67	0.0	0.00
067-41	86.4	0.47
067-42	145.2	2.22
067-43	0.0	0.00
067-44	109.8	2.19
067-45	50.4	0.31
067-46	46.2	1.01
067-47	2.4	0.04
070-41	42.0	1.19
070-42	34.2	1.06
070-43	84.6	2.15
070-44	161.4	3.18
077-A	103.2	0.16
077-B	0.0	0.00
077-C	0.6	0.01
077-H	8.4	0.06
078-41	31.2	0.14
078-42	9.6	0.09
078-43	0.0	0.00
078-44	4.2	0.09
078-45	9.6	0.11
078-46	141.6	2.15
086-41	157.8	1.42
086-42	137.4	2.20
089-41	46.8	1.14
089-42	26.4	0.26
089-43	3.6	0.03

089-44	513.0	2.00
120-D	157.8	1.25
124-41	97.2	0.44
125-41	49.8	0.36
128-41	61.8	0.26
128-42	125.4	3.21
131-41	124.2	2.14
131-42	279.6	5.13
131-43	183.0	2.20
131-44	82.2	2.06
132-41	53.4	0.31
132-42	355.2	5.32
132-49	112.2	0.57
147-41	27.6	0.20
147-42	34.8	0.27
147-43	0.0	0.00
161-41	33.6	0.24
189-41	67.8	1.17
189-42	153.6	1.13
199-41	272.4	4.14
241-42	37.8	0.16
241-44	13.2	0.17
241-45	27.6	0.28
241-46	51.6	0.36
241-47	271.8	3.00
243-41	127.2	2.23
243-42	54.6	1.31
243-43	168.6	2.40
243-44	195.0	2.15
287-42	79.2	1.21
299-41	155.4	2.37
304-41	101.4	0.40
358-41	7.8	0.06
		92.50

Substation- Feeder	Feeder SAIDI	Feeder SAIFI
009-41	64.2	1.14
009-42	159.0	0.74
009-43	15.6	0.15
009-44	1272.0	2.25
009-45	33.6	0.52
009-46	96.6	0.86
015-24	169.8	2.00
015-41	1.8	0.02
015-46	15.0	0.15
015-48	125.4	0.42
042-41	31.2	0.08
042-42	781.2	2.23
042-44	5.4	0.01
055-41	55.2	0.49
055-42	57.0	2.12
055-43	535.2	3.21
055-44	154.8	0.14
059-40	270.6	1.88
059-41	329.4	3.14
059-42	102.6	2.76
059-43	32.4	1.91
059-44	24.0	0.29
059-45	1298.4	3.85
059-46	129.6	3.21
059-47	49.8	3.14
059-48	31.8	1.00
059-67	0.0	0.00
067-41	0.0	0.00
067-42	7.8	0.07
067-43	10.8	0.06
067-44	131.4	0.98
067-45	78.0	0.72
067-46	21.6	1.07
067-47	27.6	0.17
070-41	178.8	1.19
070-42	95.4	1.96
070-43	308.4	2.74
070-44	123.6	0.24
077-A	216.0	1.75
077-B	100.8	1.00
077-C	112.2	1.04
077-H	55.8	1.26
078-41	73.2	0.80
078-42	1.8	0.01
078-43	702.6	2.03
078-44	20.4	0.12
078-45	4.2	0.06
078-46	732.0	2.26
086-41	1043.4	3.50
086-42	972.0	1.72

089-41	31.8	0.22
089-42	28.8	0.22
089-43	4.2	0.03
089-44	102.6	1.74
120-D	428.4	1.83
124-41	654.0	5.63
125-41	441.6	3.85
128-41	160.2	2.31
128-42	337.2	2.81
131-41	100.2	0.92
131-42	66.6	0.35
131-43	111.6	1.26
131-44	38.4	0.93
132-41	37.8	0.24
132-42	46.2	1.00
132-49	61.8	0.41
147-41	124.2	1.23
147-42	139.2	0.65
147-43	141.6	1.10
152-41	94.2	1.00
152-42	162.6	2.05
161-41	523.8	2.52
189-41	8.4	0.05
189-42	216.6	2.57
199-41	1654.2	2.75
199-42	353.4	2.67
205-41	812.4	2.59
225-A	4.2	0.04
225-B	1022.4	0.88
225-C	0.6	0.00
241-41	0.0	0.00
241-42	4.8	0.08
241-43	108.6	1.25
241-44	788.4	1.01
241-45	34.2	0.53
241-46	1162.2	3.44
241-47	1143.6	3.21
243-41	245.4	2.61
243-42	28.8	0.22
243-43	244.2	1.44
243-44	886.2	7.97
287-41	0.0	0.00
287-42	11.4	0.66
299-41	68.4	0.40
304-41	2181.6	6.04
358-41	134.4	3.25

Substation- Feeder	Feeder SAIDI	Feeder SAIFI
009-41	192.6	2.36
009-42	28.8	0.20
009-43	7.2	0.13
009-44	25.2	0.17
009-45	16.2	0.28
009-46	69.0	1.80
015-41	4.2	0.02
015-46	172.2	0.58
015-48	5.4	0.12
042-41	145.8	1.85
042-42	325.2	5.24
042-43	0.0	0.00
042-44	1.2	0.01
055-41	12.0	0.12
055-42	100.2	0.94
055-43	94.2	1.56
055-44	21.0	0.19
059-40	59.4	1.87
059-41	70.8	1.08
059-42	275.4	3.27
059-43	283.8	2.66
059-44	391.2	4.16
059-45	300.6	3.21
059-46	271.8	3.48
059-47	111.0	2.28
059-48	76.8	1.95
067-41	36.6	1.06
067-42	0.0	0.00
067-43	0.0	0.00
067-44	108.0	1.46
067-45	273.6	1.94
067-46	4.2	0.04
067-47	130.8	3.10
070-41	47.4	0.35
070-42	84.0	1.33
070-43	265.8	4.05
070-44	105.6	0.60
077-A	0.6	0.01
077-B	124.2	1.98
077-C	129.0	2.01
077-H	18.0	0.89
078-41	49.8	1.28
078-42	21.6	0.08
078-43	62.4	1.07
078-44	26.4	0.29
078-45	28.8	1.12
078-46	158.4	3.52
086-41	104.4	1.50
086-42	181.2	1.49
089-41	22.2	0.41

089-42	37.2	0.32
089-43	64.8	1.06
089-44	46.8	0.90
120-D	87.0	1.78
124-41	373.2	3.57
125-41	579.0	4.42
128-41	69.0	0.54
128-42	20.4	0.11
131-41	63.6	0.43
131-42	13.8	0.14
131-43	196.2	3.46
131-44	1.8	0.01
132-41	18.6	0.37
132-42	123.0	2.06
132-49	91.8	1.08
143-41	0.6	0.00
147-41	197.4	1.73
147-42	48.6	0.29
152-41	158.4	1.75
152-42	56.4	1.03
161-41	177.0	2.00
189-41	76.8	0.86
189-42	328.8	3.41
189-43	0.0	0.00
199-41	229.2	2.54
199-42	444.6	2.53
205-41	9.6	0.08
225-A	55.8	1.54
225-B	48.0	1.06
225-C	25.8	0.94
241-41	0.0	0.00
241-42	8.4	0.05
241-44	15.6	0.13
241-45	16.8	0.16
241-46	56.4	0.34
241-47	60.6	0.28
243-41	129.0	0.60
243-42	7.8	0.10
243-43	135.0	0.99
243-44	91.2	1.44
287-42	48.0	1.09
289-41	23.4	1.07
299-41	112.8	1.27
304-41	318.6	1.51
310-41	0.0	0.00
358-41	50.4	1.13

Substation-Feeder	Feeder SAIDI	Feeder SAIFI
009-41	88.2	0.34
009-42	520.8	3.60
009-43	288.0	3.50
009-44	540.6	1.29
009-45	44.4	0.49
009-46	49.8	0.45
015-41	255.6	1.11
015-46	1.8	0.01
015-48	0.6	0.01
042-41	210.0	1.52
042-42	141.6	1.93
042-43	3.0	0.09
042-44	45.6	1.27
055-41	160.2	3.31
055-42	117.6	2.40
055-43	77.4	2.32
055-44	86.4	3.18
059-40	381.0	3.86
059-41	313.2	1.87
059-42	450.6	2.18
059-43	22.2	0.40
059-44	136.2	2.47
059-45	216.0	2.47
059-46	579.0	3.64
059-47	49.8	0.69
059-48	268.8	0.48
067-41	21.6	0.34
067-42	0.6	0.01
067-43	9.6	0.09
067-44	128.4	1.57
067-45	46.2	0.92
067-47	236.4	1.77
070-41	144.6	2.69
070-42	126.6	1.41
070-43	57.0	2.56
070-44	63.6	0.46
077-A	215.4	0.43
077-B	574.8	0.99
077-C	621.0	1.57
077-H	235.2	1.74
078-41	59.4	0.25
078-42	4.2	0.08
078-43	1.8	0.03
078-44	21.0	0.11
078-45	37.8	1.13
078-46	24.0	0.62
086-41	197.4	1.59
086-42	97.2	1.27
089-41	18.6	0.40
089-42	9.6	0.16

089-43	1.8	0.02
120-D	85.2	1.49
124-41	531.6	6.75
125-41	134.4	2.57
128-41	109.2	1.14
128-42	49.8	1.42
131-41	49.2	0.46
131-42	22.2	0.13
131-43	127.8	2.07
131-44	2.4	0.03
132-41	4.8	0.35
132-42	40.8	1.17
132-49	190.2	1.20
143-41	0.0	0.00
147-41	765.6	2.40
147-42	353.4	2.16
147-43	294.0	2.00
152-41	96.6	1.34
152-42	168.0	2.82
161-41	150.0	1.76
189-41	21.6	0.35
189-42	159.6	0.80
199-41	88.8	2.28
199-42	201.0	3.92
199-43	72.0	1.42
205-41	222.6	2.22
210-041	88.8	1.04
210-042	25.2	0.21
225-A	0.0	0.00
225-B	20.4	0.19
241-41	192.6	1.41
241-42	151.8	2.13
241-43	456.6	4.33
241-44	453.6	1.15
241-45	193.2	3.24
241-46	325.2	3.63
241-47	0.0	0.00
243-41	156.6	0.52
243-42	76.8	0.24
243-43	942.6	2.82
243-44	93.6	0.76
287-42	20.4	0.14
289-41	40.8	0.42
299-41	259.8	2.54
304-41	210.0	2.46
358-41	141.0	0.43

Substation-Feeder	Feeder SAIDI	Feeder SAIFI
009-41	22.2	0.21
009-42	30.0	0.42
009-43	111.6	2.32
009-44	229.2	3.70
009-45	15.6	0.25
009-46	240.6	1.45
015-24	82.8	1.00
015-41	363.6	2.57
015-48	22.2	0.28
042-41	75.6	0.78
042-42	90.6	0.88
042-44	26.4	0.29
055-41	19.8	0.26
055-42	67.8	1.17
055-43	123.6	1.50
055-44	84.6	0.93
059-40	1.2	0.08
059-41	16.2	0.30
059-42	16.2	0.22
059-43	16.8	0.12
059-44	17.4	0.82
059-45	235.8	4.23
059-46	51.0	0.24
059-47	121.8	1.23
059-48	184.2	1.01
067-41	33.0	1.22
067-42	1.2	0.01
067-43	0.6	0.00
067-44	25.2	0.30
067-45	97.2	1.41
067-46	0.6	0.01
067-47	8.4	0.09
070-41	43.2	0.38
070-42	115.8	1.59
070-43	85.8	0.73
070-44	8.4	0.08
077-B	2.4	0.04
077-C	0.6	0.01
077-H	6.6	0.06
078-41	207.6	3.04
078-42	87.0	1.19
078-43	33.6	0.41
078-44	46.2	0.56
078-45	132.6	2.26
078-46	98.4	1.21
086-41	287.4	3.61
086-42	43.8	0.22
089-41	0.0	0.00
089-42	16.8	0.41
089-43	3.6	0.16

120-D	116.4	0.95
124-41	67.8	0.91
124-42	165.6	2.53
125-41	67.8	0.97
128-41	45.6	1.28
128-42	11.4	0.98
128-43	66.0	2.12
128-44	10.8	0.14
128-45	24.0	1.00
131-41	13.2	0.26
131-42	4.2	0.03
131-43	127.2	2.44
131-44	0.6	0.03
132-41	21.0	0.18
132-42	297.6	4.80
132-49	79.2	0.44
147-41	99.6	1.06
147-42	221.4	2.44
147-43	0.0	0.00
151-524	88.8	1.00
152-41	74.4	1.72
152-42	11.4	0.09
161-41	24.6	0.28
189-41	76.8	1.41
189-42	64.8	0.66
189-43	0.0	0.00
199-41	90.0	0.96
199-42	88.8	1.25
199-43	0.6	0.00
205-41	30.6	0.21
210-041	1.2	0.01
210-042	111.0	1.24
225-A	77.4	1.20
225-B	103.8	1.15
225-C	59.4	0.72
241-41	98.4	0.18
241-42	87.6	0.80
241-43	0.0	0.00
241-44	0.0	0.00
241-45	63.0	0.68
241-46	42.0	0.51
241-47	16.8	0.40
243-41	21.0	0.31
243-42	34.8	0.30
243-43	18.0	0.16
243-44	79.8	2.29
287-42	45.0	0.18
289-41	19.8	0.17
289-42	24.0	1.00
299-41	195.6	1.87
304-41	106.2	0.64
358-41	118.8	1.28



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-028**

**REQUEST:**

28. What is an acceptable value for SAIDI and SAIFI? Explain how it was derived.

**RESPONSE:**

It is difficult to specify an exact value for SAIDI and SAIFI that is acceptable. SAIDI and SAIFI, along with other reliability measures, vary significantly over time. Adverse weather has a very strong influence on electric reliability. Since the amount of adverse weather varies significantly from year to year, SAIDI and SAIFI will vary as well.

SAIDI and SAIFI are influenced by customer load density, weather patterns, local terrain and associated infrastructure. For example, an electric utility with mostly rural customers will have more miles of line exposure per customer than a utility with mostly urban customers. The extra exposure per customer tends to make rural reliability less than urban reliability. Thus individual utilities may have different SAIDI and SAIFI due to load density and infrastructure. Weather maps show some areas have many more thunderstorms than other areas. Again, the utility with greater adverse weather may have less reliability. One utility might have a high proportion of densely forested areas in its service areas, while another utility might have a high proportion of cultivated farmland in its service area. These are just a few of the factors that make SAIDI and SAIFI vary over time and from region to region. It would not be appropriate to compare the SAIDI or SAIFI scores of one utility to other utilities due to the different characteristics of their service areas.

SAIDI and SAIFI are averages for the entire system and are only two of many factors that influence customer satisfaction with electric service. Number of outages, duration of outages, response during major events, and customer communication during outages are some of the performance attributes that collectively cause satisfaction or dissatisfaction with reliability. Further, expectations between individual customers vary significantly. Commercial customers may be willing to pay for better reliability than residential customers. Acceptable reliability varies with age and income levels of residential customers. Outages that occur during a major storm have less impact on satisfaction than outages that occur during a clear day. The company monitors reliability metrics, tracks customer satisfaction, places extra emphasis on high outage frequency situations, emphasizes speedy recovery from storms, and works to communicate with customers during outages. The customer satisfaction levels and low number of reliability complaints to the Commission are two good indicators that existing levels of SAIDI and SAIFI are acceptable.

**WITNESS RESPONSIBLE:** Larry E. Conrad



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-029**

**REQUEST:**

29. Provide the yearly Customer Average Interruption Duration Index (“CAIDI”) and the Customer Average Interruption Frequency Index (“CAIFI”), including and excluding major outages, on your system for the last five years. What is an acceptable value for CAIDI and CAIFI? Explain how it was derived.

**RESPONSE:**

Year	CAIDI (minutes)	
	Incl Major	Excl Major
2000	95	94
2001	216	99
2002	86	83
2003	100	77
2004	74	74

Year	CAIFI	
	Incl Major	Excl Major
2000*	n.a.	n.a.
2001	2.7	2.0
2002	2.2	2.1
2003	2.2	2.2
2004	1.9	1.9
*CAIFI data unavailable for 2000		

It is difficult to specify an exact value for CAIDI and CAIFI that is acceptable. CAIDI and CAIFI, along with other reliability measures, vary significantly over time. Adverse weather has a very strong influence on electric reliability. Since the amount of adverse weather varies significantly from year to year, CAIDI and CAIFI will vary as well.

CAIDI and CAIFI are influenced by customer load density, weather patterns, local terrain and associated infrastructure. For example, an electric utility with mostly rural customers may have more miles of line exposure per customer and greater distances for repair crews to travel than a utility with mostly urban customers. The extra exposure per customer tends to make rural reliability less than urban reliability. Greater distances between customers tend to increase CAIDI. Thus individual utilities may have different CAIDI and CAIFI due to a variety of reasons. Weather maps show some areas have many more thunderstorms than other areas. Again, the utility with greater adverse weather may have

less reliability. One utility might have a high proportion of densely forested areas in its service areas, while another utility might have a high proportion of cultivated farmland in its service area. These are just a few of the factors that make CAIDI and CAIFI vary over time and from region to region. It would not be appropriate to compare the CAIDI or CAIFI scores of one utility to other utilities due to the different characteristics of their service areas.

CAIDI and CAIFI are averages for the entire system and are only two of many factors that influence customer satisfaction with electric service. Number of outages, duration of outages, response during major events, and customer communication during outages are some of the performance attributes that collectively cause satisfaction or dissatisfaction with reliability. Further, expectations between individual customers vary significantly. Commercial customers may be willing to pay for better reliability than residential customers. Acceptable reliability varies with age and income levels of residential customers. Outages that occur during a major storm have less impact on satisfaction than outages that occur during a clear day. The company monitors reliability metrics, tracks customer satisfaction, places extra emphasis on high outage frequency situations, emphasizes speedy recovery from storms, and works to communicate with customers during outages. The customer satisfaction levels and low number of reliability complaints to the Commission are two good indicators that existing levels of CAIDI and CAIFI are acceptable.

**WITNESS RESPONSIBLE:** Larry E. Conrad



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-030**

**REQUEST:**

30. Identify and describe all reportable distribution outages from January 1, 2003 until the present date. Categorize the causes and provide the frequency of occurrence for each cause category.

**RESPONSE:**

<u>Date/Time</u>	<u>Customers Affected</u>	<u>Cause</u>
2/16/2003 to 2/18/2003	Several thousand customers affected, various times and intervals	Road Salt Spray from I- 71,75
4/25/2003 23:40	984	Vehicle Accident
7/5/2003 2:22	930	Thunderstorms
7/5/2003 15:35	816	Thunderstorms
7/9/2003 22:00	3,300	Thunderstorms
7/21/2003 12:54	3,404	Thunderstorms
7/21/2003 13:02	3,406	Thunderstorms
7/21/2003 14:09	709	Thunderstorms
8/2/2003 9:47	573	Thunderstorms
9/27/2003 6:26	1,153	Thunderstorms

**WITNESS RESPONSIBLE:** Larry E. Conrad



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-031**

**REQUEST:**

31. Does your utility have a distribution and/or transmission reliability improvement program?
- a. How does your utility measure reliability?
  - b. How is the program monitored?
  - c. What are the results of the system?
  - d. How are proposed improvements for reliability approved and implemented?

**RESPONSE:**

ULH&P measures reliability with standard metrics of SAIFI and CAIDI. SAIFI measures number of outages while CAIDI measures speed of restoration once an outage has occurred. ULH&P monitors these metrics monthly and includes CAIDI and SAIFI in key employee performance evaluations. ULH&P also reviews feeders with higher outage frequency and local situations with higher outage frequency. For 2005, ULH&P added CEMI<sub>5</sub> to place more emphasis on those customers with the highest outage frequency. CEMI<sub>5</sub> measures the percent of customers who experience more than five sustained outages per year. With these programs, ULH&P has maintained good reliability and improved reliability in many cases of high outage frequency. Reliability improvements are part of ULH&P's normal business and budgeting process.

**WITNESS RESPONSIBLE:** Larry E. Conrad



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-032**

**REQUEST:**

32. Provide a summary description of your utility's:
- a. Right-of-way management program. Provide the budget for the last 5 years.
  - b. Vegetation management program. Provide the budget for the last 5 years.
  - c. Transmission and distribution inspection program. Provide the budget for the last 5 years.

**RESPONSE:**

- a. The Right of Way Services Group responds to a number of inquiries about our existing easements, to requests to encroach within the limits of our rights-of-way and to other encroachment situations that are discovered by Company personnel. Typically, these require an investigation and an explanation to property owners of our existing land rights that cover the installation, operation and maintenance of our facilities. Occasionally, an explanation of our rights may not suffice and then we may need to pursue some sort of legal recourse to enforce our rights to protect our facilities and our ability to provide safe and reliable service to our customers. There are times when it is determined that the request to encroach will not interfere with our rights and our abilities to operate and maintain our system. In those cases, we will enter into an agreement to permit and define the allowable encroachment. Below are the ULH&P costs for the labor and expenses of our Right of Way Management Program over the last five years.

<b>Year</b>	<b>Costs</b>
2000	\$29,369
2001	\$20,809
2002	\$21,293
2003	\$25,188
2004	\$17,195

Additionally, the Right of Way Services Group performs similar investigations of our existing land rights and communicates these findings to our Vegetation Management Department and/or affected property owners to allow us to properly control of vegetation within our right of

way corridors. Below are the ULH&P costs for the labor and expenses of our Right of Way Services Group for these activities over the last 5 years.

<b>Year</b>	<b>Costs</b>
2000	\$5,612
2001	\$2,699
2002	\$3,522
2003	\$4,462
2004	\$4,266

- b. The goal of the vegetation management program is to help provide safe and reliable electric service by limiting contact between vegetation and transmission power lines. To support this goal a variety of techniques are used to achieve the necessary line clearance including pruning, cutting, mowing and herbicide spray applications. These techniques are performed during maintenance cycles which range every three – six years depending on the needs of each circuit.

The expenditures for vegetation management in ULH&P over the last five years were as follows:

<b>Year</b>	<b>Costs</b>
2000	\$ 1,246,746
2001	\$ 1,914,770
2002	\$ 2,087,717
2003	\$ 2,590,289
2004	\$ 4,177,616

- c. Inspections of the distribution system are performed once every two years. There is a walking inspection of the transmission system completed every year and an aerial inspection completed twice per year. Inspections will identify visible physical deficiencies, clearance issues, and vegetation growth that exist.

The Feeder Graphics and Inspections group is responsible for the inspection of the distribution system. The transmission system inspection is the responsibility of the Transmission and Distribution Construction and Maintenance Department. The distribution and transmission system inspections are on-going throughout the year. An aerial helicopter inspection is completed twice a year in the spring and the fall.

In addition, there is a transmission pole ground line inspection and treatment program to inspect and treat transmission poles on a ten year cycle. This is an on-going program with budgeted dollars varying from year to year. In 2004, a transmission ground line inspection was completed on a portion of the system.

In 2001, a distribution pole ground line inspection was completed on a portion of the system.

**Transmission and Distribution Inspection Budgets for 2001 – 2005**

2005	\$ 154,000
2004	\$ 210,000 (includes transmission ground line inspection)
2003	\$ 145,000
2002	\$ 141,000
2001	\$ 299,000 (includes distribution ground line inspection)

**WITNESS RESPONSIBLE:**

- a. Russ Campbell
- b. Everett Greene, Jr.
- c. David Ward



**KyPSC Staff First Set Interrogatories**  
**ULH&P Case No. 2005-00090**  
**Date Received: March 10, 2005**  
**Response Due Date: March 31, 2005**

**KyPSC-INT-01-033**

**REQUEST:**

33. Explain the criteria your utility uses to determine if pole or conductor replacement is necessary. Provide costs/budgets for transmission and distribution facilities replacement for the years 2000 through 2025.

**RESPONSE:**

Distribution poles and conductors are inspected once every two years and the condition of the pole and conductor is examined for any visual damage or deterioration. In addition, the performance of circuits is periodically reviewed by the area engineer to determine if there is a need for a project to replace poles or conductors.

Poles that have damage or decay will be reported by the inspection technicians to the Transmission and Distribution Construction and Maintenance Department for further assessment by a qualified field construction supervisor and field crews. The field supervisor will sound the pole with a hammer and/or have the pole bored to assess the degree of decay. Based on this analysis, the pole may be reinforced or replaced.

Conductors that have broken or damaged strands will be reported by the inspection technicians to the Transmission and Distribution Construction and Maintenance Department (TDCM) or identified and address by TDCM field supervisors. The field supervisor will assess whether replacement or repair is required. Repair sleeves can be used when only a few strands are broken or damaged.

**Distribution upgrade and replace budgets for the years 2000 through 2025**

2010 – 2025	no budget dollars have been established beyond 2009
2009	\$1,787,000
2008	\$1,679,000
2007	\$1,636,000
2006	\$1,593,000
2005	\$1,546,000
2004	\$1,169,000
2003	\$1,118,000
2002	\$ 679,000
2001	\$1,065,000
2000	\$ 778,000

**Transmission upgrade and replace budgets for the years 2000 through 2025**

2010 – 2025	no budget dollars have been established beyond 2009
2009	\$ 66,300
2008	\$ 64,400
2007	\$ 62,700
2006	\$ 62,200
2005	\$ 63,800
2004	\$ 65,300
2003	\$176,200
2002	\$161,500
2001	\$ 50,000
2000	\$ 25,000

**WITNESS RESPONSIBLE:** David Ward